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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,480	06/25/2003	Axel Knauff	KNAUFF-4	3522
20151 7590 01/14/2008 HENRY M FEIEREISEN, LLC 350 FIFTH AVENUE SUITE 4714 NEW YORK, NY 10118			EXAMINER FORD, JOHN K	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 01/14/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/603,480

Applicant(s)

KNAUFF, AXEL

Examiner

John K. Ford

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2004-09-17, 2003-06-25
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Pursuant to MPEP 2001.06(a), applicant is required to submit a translation of the German Patent Office action as well as a translation of the claims that were being examined by the German Patent Office. The existence of the German Patent Office action is documented in applicant's IDS of September 17, 2004. The short explanations that applicant has provided of the references on the IDS do not adequately describe the portions of these references that the German Patent Office was apparently relying on to reject claims that are presumably similar to those currently examined here.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no enabling disclosure to support the limitations added to claims 12 and 20. With regard to claim 12, there is no optimization algorithm disclosed or even an indication of what variable(s) is/are being optimized. Similarly, with regard to claim 20, there is no disclosure of how the motor is to be operated "to suit the demand of heat for the overall process". The motor control is illustrated as the proverbial black-box in the

drawing Figure without any disclosure of the myriad of sensors that would be required to carry out the desired results claimed in claims 12 and 20, or of the, no doubt, complex algorithms necessary to carryout these functions.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The examiner believes that these claims do not accurately reflect the actual function of the claimed "cooling element" and "heating element." These elements do not change the heat flux dissipated from the motor. Instead they, respectively, take heat out of the fluid circuit and add heat to that fluid circuit. These claims as written are not descriptive of the disclosed system.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Green (USP 5,531,285).

The examiner considers the hybrid electric vehicle system disclosed in Green to be to an "electrically operated production machine" because it produces motive power by converting electrical energy in electric traction motor 6 to kinetic energy that drives the wheels of the vehicle and because there is nothing in the specification or claims that limits the meaning of this term to any specific type of apparatus.

Regarding claims 1 and 14, the claimed "electric motor" is 6 and the claimed "machine element" is IC engine 3. A liquid cooling/heating system takes waste heat from the electric motor 6 and uses it to heat the IC engine 3. Regarding claims 3, 14 and 15, the heat exchanger is deemed to be inherent, there being no other way than through heat exchange to dissipate heat from the electric motor to a circulating coolant. Regarding claims 6 and 7, the piping to the engine 3 is "around" the engine (i.e. in the vicinity of it) and the fluid is circulated through the engine as shown in the drawing Figure 1. Regarding claims 8, 9 and 17, while no circulating coolant pump is shown, it is disclosed that the liquid circulates through the circuit at 5-10 liters per minute, a rate

that would necessitate a pump, which would have been obvious to have used (official notice taken of pumps in fluid circuits) if it is not inherent in the reference itself.

Regarding claim 10, a cooling element is shown at 1. Regarding claims 11 and 19, a heating element is shown at 5. Regarding claims 12 and 20, at least one controller is disclosed in col. 2, lines 41-57, incorporated here by reference by way of explanation. Regarding claim 13 and 21, as disclosed in col. 5, lines 15-20, the system has valves and connecting conduits to permit bypassing the engine 3.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green as applied to claims 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20 and 21 above, and further in view of Muso et al (USP 5,678,760).

Muso shows the pump 4, integral heat exchanger 36 in Figure 18 and wraparound tube heat exchanger 36 in Figure 20. Regarding claims 4 and 16, it would have been obvious to have used the wraparound tube heat exchanger 36 disclosed in Figure 20 of Muso to exchange heat with traction motor 6 of Green to enjoy the advantages of this construction disclosed by Muso (namely better heat exchange). Finally, regarding claim 18, a cooling element 3 (in Muso) is disposed between the pump 4 (in Muso) and the heating means 2 (in Muso). To have placed a pump in the corresponding position in Green would have been obvious to one of ordinary skill in the art to enjoy a positive circulation of the circulating liquid and maintain the system at a desirable low temperature.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John K. Ford
Primary Examiner